TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

85 FEB 22 P1:09

February 19, 1985

WBRD-50-390/81-93
WBRD-50-391/81-87

U.S. Nuclear Regulatory Commission
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - THERMAL RANGE INCORRECTLY ANALYZED - WBRD-50-390/81-93 AND WBRD-50-391/81-87 - EIGHTH INTERIM REPORT FOR UNIT 2

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on October 22, 1981 in accordance with 10 CFR 50.55(e) as NCR WBN CEB 8116. Interim reports were submitted on November 24, 1981 and March 2, April 18, September 20, and December 6, 1982. Our final report for unit 1 and sixth interim report for unit 2 was submitted on June 30, 1983. The seventh interim report for unit 2 was submitted on January 9, 1984. Enclosed is our eighth interim report for unit 2.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. W. Hufham, Manager
Licensing and Regulations

Enclosure
cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

OFFICIAL COPY

IE 27

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
THERMAL RANGE INCORRECTLY ANALYZED
WBRD-50-390/81-93 AND WBRD-50-391/81-87
NCR WBN CEB 8116
10 CFR 50.55(e)
EIGHTH INTERIM REPORT FOR UNIT 2

Description of Deficiency

The Watts Bar Nuclear Plant (WBN) Final Safety Analysis Report (FSAR), Section 10.4.9.2, defines a thermal range for the auxiliary feedwater (AFW) system of 40 to 120°F. The ASME code, Section NC-3651, classes 2 and 3 piping systems, required that a full range of movements be evaluated. A thermal range of 70 to 120°F was used to evaluate the moments for suction and discharge piping for the AFW pumps by the piping stress analyst. This condition may result in unconservative stress levels. Piping analysis problems affected by the above omission are units 1 and 2, 0600-200-02-05, -06, -07, -08, 0600-200-05-01, -02; unit 1, N3-3-10A, -12A and unit 2, N3-3-1A, -2A, -0A, -17A, and -19A.

The analysis errors mentioned above were discovered during an analysis review.

Interim Progress

A final report on unit 1 was sent to the NRC-OIE on June 30, 1983. TVA has begun the unit 2 support design rework required for the resolution of this nonconformance report (NCR) under engineering change notice (ECN) 4787. However, this design work is not yet complete due to the revision of the unit 2 work schedule. TVA will submit a final report on unit 2 by November 6, 1985, upon conclusion of the design rework required.